

Remarks

Claims 51-94 remain in the application. Claims 1-50 and 95-98, standing withdrawn as being drawn to a non-elected invention, have been cancelled, but this does not indicate that Applicants have abandoned the invention or the intention to pursue patent protection for the non-elected invention.

Claims 1 and 91 have been amended to clarify that the mat has unique flame resistance and flex and recovery properties after scoring and folding. Basis for these amendments can also be found near the end of page 1, in line 34, and lines 1-11 of page 3 of the specification. This is unique in that other nonwoven mats do not have this characteristic, a characteristic that is essential to using the nonwoven mat to make a folding window shade.

The present invention are mats having excellent and unexpected flame resistance and flex and recovery properties after scoring and folding, the mat passing the National Fire Protection Association's (NFPA) Method #701 Flammability Test. As pointed out in the specification at the places indicated above, these properties are unique and unexpected in nonwoven mats containing a majority of glass fibers bound together with an organic binder. Such properties are very important to using non-woven mats on ceiling panels and other specialty products.

Claims 51-94 were rejected under 35 USC 103 as being unpatentable over Geel in view of Arkens. The Examiner stated that Geel teaches nonwoven mats containing 10-80 wt. percent glass fibers and 20-90 percent PET fibers bound together with a resin binder, but not the type of binder used in the invention. The Examiner also stated that Arkens et al teaches a fiber glass nonwoven mat containing a type of binder of the type used in the invention and urges that it would have been obvious to have used the Arkens et al binder in the mats taught by Geel instead of the binder taught by Geel because both patents teach making nonwoven mats of fibers bound with a resin binder. The Examiner also admitted that neither reference teaches the ratios of wet to dry tensile strength recited in the claimed invention, but presumes that this property would be inherent in the mats of Geel and Arkens et al. This rejection and its basis is respectfully traversed.

First, neither reference teaches that the nonwoven mats disclosed in the references have excellent and unexpected flame resistance and flex and recovery properties after scoring and folding, or that any of the nonwoven mats would be useful in ceiling tile or specialty products requiring such properties or that their mats pass the National Fire Protection Association's (NFPA) Method #701 Flammability Test. Second, Arkens et al, at col. 1, lines 22-25 teaches that their binder is for nonwovens composed of fiberglass or other heat resistant fibers. This would lead one away from using the binder with polyester fibers. Third, Geel teaches a mat useful as reinforcement membrane for vinyl flooring, a completely different application from ceiling tile. It is not necessary to score and fold nonwoven mat for use in vinyl flooring. Forth, Geel does not teach, or reasonably suggest, a mat comprising 8-16 wt. percent or 5-20 wt. percent polymer fibers, but instead urges using more than 20 wt. percent PET fibers such as 25-40 wt. percent, see paragraph number 13 of Geel. Fifth, the Examiner urges that the ratio of wet tensile strength to dry tensile strength of Applicants' mat is inherent in the mats of Geel. This is not so because Geel teaches using PVA and a secondary binder and then curing the mat at 100-200 deg. C., see paragraph number 23, and one of ordinary skill in the art would know that such mats would not have as high a percent of wet tensile strength as 35 percent. Sixth, the Examiner has not pointed out where Arkens et al teach the binder as described in claims 53 and 54. Finally, it is incumbent upon the Examiner to provide a reasonable basis for why it would be obvious for one skilled in the art to have combined the teachings of the two references in such a way as to produce one or more mats described by each of the claims, and the Examiner has failed to do so. It is simply not obvious to combine any combination of teachings in all nonwoven references simply because they all teach making a nonwoven mat, there has to be a reasonable reason provided by at least one reference for combining the teachings in the way the Examiner does to reject the claims.

For these reasons, Applicants believe that the claims are patentable and respectfully requests the Examiner to withdraw this rejection and to allow all of the claims.

Claims 51-94 were rejected under the nonstatutory double patenting doctrine because of the claims in pending patent application Serial No. 10/717,802 in view of Geel. The Examiner states that the claims of the copending application fail to include polymer

fibers in the nonwoven mat and that because of the teachings of Geel it would have been obvious to have included polymer fibers in the invention of the other pending application. This rejection is respectfully traversed because the present claims cannot prevent the practice of the invention in Serial No. 10/717,802 - that invention does not require the use of polymer fibers in the mat as the present claims require. For this reason the Examiner is respectfully requested to withdraw this rejection and to allow all of the claims.

Applicants believe that the claims are now in condition for allowance, but if the Examiner believes one or more issues still exist, to expedite disposal of this application the Examiner is respectfully invited to call Applicants' attorney at the number listed below to discuss the issue or issues and a way of removing.

Respectfully submitted,


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